

## **CURRICULUM VITAE of:**

**Prof. Dr. Wafaa M. Abdou (D.Sc.), 2016**

**Date & place of birth:** Sep. 17<sup>th</sup>,  
1943, Sharkia, Egypt

**Nationality** : Egyptian

**Marital status:** married, 2 children

**Perm. Addr:** 1A Okasha Street,  
Apartment 42, Dokki, Cairo, Egypt

**Languages:** Arabic, mother tongue  
Other languages-English (reading, writing,  
speaking, excellent;  
German (reading, writing, speaking, *good*).

**Academic title:** Professor of Applied Org.  
Chem. 1986.

**Present appointment:** Principal Investigator since 1991,  
leads a research group/NRC.

### **Address for correspondence:**

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National Research Centre (NRC),  
El-Tahrir St., Dokki  
D-12311, Cairo, Egypt.

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### **Field of specialization:**

- 1- **Main:** Applied Organic Chemistry: Bio-organophosphorus Chemistry
- 2- **Applications:** Pharmaceutical chemistry (cancer & bone diseases),  
**Other Interests:** Heterocyclic Chemistry & its applications.

[Mostly investigate fundamental chemistry that deals with phosphorus chemistry leading to new phosphono substituted-compounds or-heterocycles, which are likely have potential in drug discovery.

### **Academic Qualification:**

- **D.Sc.:** Bio-organophosphorus Chem. **2003, RSC, U.K.**
- **Ph.D.:** Applied Organic Chem.-, **1973, M.Sc.-: 1968; B.Sc.:** Chem. & Physics (v.good), **1964**, Faculty of Science, Cairo Univ.
- **Scientific Publications:**

**168**-Publications have been published in International Scientific Journals, generally deals with organophosphorus chemistry, heterocyclic chemistry and photochemistry. These publications are **cited > 2500 times** (Citation Index) by others in the International Journals; Supervised or shared in the supervision of **> 40** graduate degrees.

## **Academic awards & prizes:**

### **State Awards:**

1. **State's Medal of Science and Art of the First Rank, 1995.**
2. **State's Prize** of Chemistry, **1991**, ASRT.

### **International Awards:**

1. **Gold Medal & International Scientific Partnership Foundaton Award (CBC-2015. St. Petersburg" of Int. Scientific Partenership Foundation** for her Contribution to the Chemistry of Heterocycles (**2015**).
2. **Gold Badge of Int. Scientific Partenership Foundation** for her Contribution to World Science (**2010**).
3. **Honorary Diploma (2007/Eurasian International Scientific Partnership Foundation.**
3. Assigned by **the COMESTECH (Report (2006):** she assigned one of the Pioneer Scientists in Egypt, the 4<sup>th</sup> place in NRC.
4. **WOMAN OF THE YEAR (in Chemistry), 2004**, awarded from *Amer. Biographical Institute, and its International Research Board.*
5. Dr Abdou's profile is included in the American Periodical: **Who's Who** editions since **2000 and uptill now.**
6. The degree of Doctor of Science (**D.Sc.**), **2003** from the Royal Society of Chemistry, U.K 2003.

### **NRC Awards:**

7. NRC's **Scientific Contribution Award** for the years: **2014, 2013, 2012, 2011, 2010.**
8. Scopus Prize, NRC: high number of publications/Int. Scietific Journals of high impact factor (**2011**); **2010.**
9. NRC's Scientific **Appreciation Award, 2010.**
10. NRC's Prize for Scientific Distinction (**2003**).
11. **Scientific Supremacy Prize (in Chemistry, 1998)**, NRC.
12. **Encouragement Prize** of Chemistry. **1986/NRC.**

### **Scientific Publications:**

- > **168** Publications (cited > 955 times) /Int. Scientific Journals, generally deals with applied organophosphorus chemistry, heterocyclic chemistry. Web Science: h-index: 14

- H index: 15 (Web of Science: Citation Index References).
- A *Patent*, ASRT titled: Elaborating Anti-Inflammatory Joint Disease (Arthritis) and Anti-osteoporositic Agents, Derived from 1,1-bis-phosphonic acids.
- Books: *The Art of Structural Elucidation via Spectroscopy*, Dar Heraa, Kuwait. Abdou has a Chapter (3) title: *Correlation between <sup>31</sup>P-NMR and Other Elements pp 75-108 (2008)*.
- **Supervision:** Supervised or shared in the supervision of **21** graduate degrees, M.Sc. theses (**8**) and Ph.D. dissertations (**11**). Besides, two registrations are in the final stage (*Scientific School is annotated*).

### **Some Scientific Missions:**

- She has been awarded several research grants from USA, Germany, Britain Poland, and Italy.
- The applicant spent four sabbatical years **1975-1979** in Faculty of Girls, Jeddah, A.S.K. Teaching general- and organic chemistry.

### **Most Important International Symposium & Conferences:**

#### ***I- Organized or Shared in the Organization of several Int. and National Symps. & Conferens.***

#### ***Here is Most Important International Symposium & Conferences:***

1. Since **2002**, a member of the International Advisory Committee of: International Conference on Current Trends in Drug Discovery Research (CTDDR), Lucknow, India.
2. Since **2002**, a member of the Scientific Committee of the biannual Eurasian Meeting on Heterocyclic Chemistry
3. A member of the Sceintific Committee of International Conference on Phosphorus Chemistry (*ICPC*) organized by American Chemical Soceity, since **1997**, every 3 years.

#### ***II- National Symposium & Conferences***

4. The Egyptian Conference Celebrating International year of Chemistry: IYC **2011**.
5. A Co-Joint Symposium with Italian side sponsered by ASRT & Italian Akademy of Sciences at the NRC, titled: ***The Role of the Computational Chemistry in Drug Discovery, 2010***.
6. The biannual International Conferences of the Chemical Idustries Division for years **2014, 2012, 010, 08, 06, 04**. The conferences had been held on NRC.

7. Ibn Sina International Conferences on Pure and Applied Heterocyclic Chemistry: **2015, 2010, 2008, 2006, 2004....1994.**
8. 3<sup>rd</sup> Congress of Toxicology in Developing Countries, Cairo, **1995.**
9. *Symposium on Pesticides and Light*, NRC, **1987**, co-jointly with the German and Egyptian parts to announce the results of the co-joint project.

## ***II. Most Important International Symposium & Conferences:***

- 7th Jordanian International Conference of Chemistry, Yarmouk University, Erbid, Jordan, 19th to 21st April, **2016**,
- 1<sup>st</sup> International Conference on Applied Chemistry (ICAC-1), Hurghada, Egypt, February, 14-17, **2016.**
- 22nd ISCB International Conference (ISCBC-2016) on Recent Trends in Affordable and Sustainable Drug Discovery and Developments, Surat, India, 6th-8th February, **2016.**
- V<sup>th</sup> International Conference "Chemistry of Heterocyclic Compounds. Modern Aspects, St. Petersburg, Russia, 30<sup>st</sup> of August to the 3<sup>rd</sup> of September **2015.**
- Huisgen 1,3-dipolar cycloaddition as a universal tool for exploration in biology, chemistry, and pharmacy, Lodge, Poland. May 26-28, **2015.**
- 13<sup>th</sup> IBN SINA International Conference on Pure and Applied Heterocyclic Chemistry (13<sup>th</sup>IbnSina), Hurghada, Egypt, February, 14-17, **2015.**
- International Conference on "Current Trends In Drug Discovery And Developments, Lucknow, India, February 25-28, **2015.**
- EFMC-ISMIC 2014: XXIII International Symposium on Medicinal Chem, [www.efmc-ismc.org](http://www.efmc-ismc.org) , Lisbon, Portugal - September 7-11, **2014.**
- 1st African Conference on Research in Chemical Education [ACRICA -1]; Addis Ababa, Ethiopia, Dec 5-7, **2013.**
- BOSS XIII-13th Belgium Organic Synthesis Symposium, Leuven, Belg., July 15-20, **2012.**
- 7th Eurasian Meeting on Heterocyclic Chemistry (EAMHC-2012), Istanbul, Turkey, June 17-21, **2012.**
- 12th Eurasia Conference on Chemical Sciences, held in Corfu, Greece, 16-21 April, **2012.**
- 18th International Conference, "Perspective and Challenges in Chemical and Biological Sciences" 28th-30th January, Guwahati, Assam, India, **2012.**
- 11th Eurasia Conference on Chemical Sciences (EuAsC2S-11), Dead Sea, Jordan, 6-10, Oct. **2010.**

- IVth International Conference CBC-**2010**, Modern Aspects of Chemistry of Heterocycles, Saint-Petersburg, Russia, 2–6 August, **2010**.
- 6th Eurasian Meeting on Heterocyclic Chemistry, Alicante, Spain June 30-July 4, **2010**.
- 4<sup>th</sup> International Conference on Current Trends in Drug Discovery Research, Lucknow, India, Febr. 17-22, **2010**
- 1<sup>st</sup> International Seminar on Pharmaceutical Education & Research, Kashpor, India, Feb 20-23, **2010**.
- 7th AFMC International Medicinal Chemistry Congress-August **23-27, 2009 in Cairns**, Queensland, Australia.
- 20th conference of Union of Arabic Chemists, March 31 to April 6<sup>th</sup>, **2008**, Tripoli, Libia.
- 5th Eurasian Meeting on Heterocyclic Chemistry, Kuwait City, Kuwait, March 1-6, **2008**.
- 5<sup>th</sup> Petra International Conference, and Trans-Mediterranean Colloquium on Heterocyclic Chemistry, Tafila- Jordan 25-28, **2007**.
- 4th Eurasian Meeting on Heterocyclic Chemistry, Thessaloniki, Greece, August 27-31, **2006**.
- 10<sup>th</sup> International Conference of ISCB on Drug Discovery: Perspectives and Challenges, Lucknow, India, February 24-26, **2006**.
- 2nd International Symposium on Drug Discovery and Process Research (DDPR), Belgaum, India, February 10-12, **2006**.
- 20<sup>th</sup> International Conference on Heterocyclic Chemistry, Palermo, Italy- July 31 to August 05, **2005**.
- 9th International Conference of Bioactive Heterocycles and Drug Discovery Paradigm, (ISCB), Rajkot, India, January 8-10, **2005**.
- \*XV<sup>1st</sup> International Conference on Phosphorus Chemistry (*ICPC*), Bermingham-United Kingdom, **2004**.
- 9th European Symposium on Organic Reactivity (ESOR 9), **Oslo, Norway**, July 12–17, **2003**.
- 2<sup>nd</sup> EurAsian Meeting "Heterocycles in Organic and Combinatorial Chemistry, Novgorod the Great, Russia, **2002**.
- 3<sup>rd</sup> International Conference of Pure, Applied and Environmental Chemistry, Irbid-Jordan, **2002**
- 2<sup>nd</sup> International Conference of Pure, Applied and Environmental Chemistry, Irbid-Jordan, **2000**
- XIV<sup>th</sup> International Conference on Phosphorus Chemistry (*ICPC*), Cincennati, USA, **1998**.

- XII<sup>th</sup> International Conference on Phosphorus Chemistry (**ICPC**), Toulouse, France, **1992**.
- 2<sup>nd</sup> International Conference on Heteroatom Chemistry (**ICHAC 2**), Albany, N.Y., USA, **1989**.
- X<sup>th</sup> International Conference on Phosphorus Chemistry (**ICPC**), Bonn, Germany, **1986**.

### **Employment History (Participation in the Constructions and Co-joint Projects):**

- Since **1991** → **now**, she has been the Principle Investigator of a research team working on a fundamental chemistry that deals with organophosphorus chemistry, leading to new phosphono-substituted compounds or heterocycles that are likely to have potential in the areas of medicinal chemistry.

### ***In the following some projects, which were executed by the candidate group:***

- NRC-10<sup>th</sup> Plan: **2013-2016**: Running Project: Utility of Natural Product-Mimics against Breast and Liver Cancers- Based on Molecular Modeling and Simulation Techniques (Code # **10010101** ).
- NRC- 9<sup>th</sup> Plan: **2010-2013**: Production of Natural Analogue materials for prevention and treatment of cancers and other diseases (Code # 9100106).
- NRC- 9<sup>th</sup> Plan: **2010-2013**: Production of Natural, Microbial, and Mimic Materials for Preventive and Treatment of Cancers and other Diseases (Code # 9100108).
- NRC- 6<sup>th</sup> Plan: **2001-2004**: Rational Pharmacological Synthesis of New Mono-and Bis- phosphonates as Anti-tumoral Bone Disease and Anti-osteoporosis (Code # 5 / 31/1).
- NRC- 7<sup>th</sup> Plan: **2004-2007**:(extension of the previous project) Rational Pharmacological Synthesis of New Mono-and Bis- phosphonates as Anti-tumoral Bone Disease and Anti-osteoporosis (Code #7010170).
- NRC- 6<sup>th</sup> Plan: **2002-2005**: Environmental Protection Technologies. (Molecular Modeling In The Design of Crop Protection Chemicals); Code #: 6/ 12/ 4
- NRC- 7<sup>th</sup> Plan: **2005-2007**: Code # 6/ 12/ 4
- **Since 2001**, our research program focus onto **two paradigm**:  
(a) Rational Pharmacological Synthesis of new Mono-and Bisphosphonates as Anti-tumoral Bone Disease and Anti-Osteoporosis: Drug Discovery Program, (b) Environmental Protection Technologies. (Molecular Modeling in the Design of Crop Protection Chemicals), **2002-2007**.

- During **2000-2001**, the applicant cooperated **with Kafr El-Zayat Company** and El-Azhar University-sponsored by **ASRT**.
- She **cooperates, eventually in solving industrial problems** for Egyptian Companies producing medicine and chemical intermediates (e.g., **El-Nasr Company for Pharmaceutical Chemicals**). Also, during **1988-1992**, she participated in executing some research projects on the Intermediary Chemicals, financed by **ASRT**.
- In **1987**, worked with a research team on a project entitled: *The Environmental Chemistry of Pesticide*.
- Participated in the period **1983-1988**, the research project on the Photodegradation of Pesticides/financed by the ASRT-DFG/Germany.

#### **Scientific Committees Memberships:**

- **1992-2012**, *Scientific Committee (Organic Chemistry) for the Research Associate Professor and Research Professor grade promotion at the National Research Centre.*
- **2010-2012**, a member of "Arbitration Committee, لجنة حكاماء" Chemical Industries Division.
- She participates occasionally in NRC-committees such as Scientific, Registeratin, Scientific Missions,...etc.

#### **Organization Memberships & International Advisory Board of International Journals**

- **2013** and since **1983**, she got a LIFE TIME Membership at the *Organization of Am. Chem. Soc* (enclosed).
- **2013** and since **2003**, Prof. Abdou got a LIFE Time Membership of RSC, UK.
- **2013** and since **2005**, a member of the *International Organization of Heterocyclic Chemistry, Italy*.
- **2013** and since **2005**, a member of the the *Board of Euroabian Organization of Heterocyclic Chemistry*.
- **2013** and since **2010**, she is a member of the *Board of Egyptian Organization of Heterocyclic Chemistry*.
- **2013** and since **2007**, a member of the *Editorial Board of Monatshefte für Chemie (Journal), Austria*.
- **2013** and since **2011**, a member of the *Editorial Board of Mediterranean Journal of Chemistry*.
- **2013** and since **2012**, a member of the *Editorial Board of Research and Reports in Medicinal Chemistry (Journal)*.
- **2013-2011**, a member of the *Editorial Board Egyptian Journal of Heterocyclic Chemistry (under production)*.

- **2013** Lead Guest Editor for a special Issue of Journal of Organic Chemistry International.
- **2013** Honorary Guest Editor for a special Issue of Journal of Pharmaceutical Sciences.
- **2013** and since **1998**, a member of the International Advisory Board of *Phosphorus, Sulfur & Silicon, and Related Elements*.
- **Prof. Abdou** is a permanent reviewer in several intern. scientific journal, **e.g.:** *Phosphorus, Sulfur, Silicon & Related Elements (USA)*; *Monatshefte für Chemie, Austria*; *Chemical Biology & Drug Design*; *European J. Med. Chem.*, *Lett. Org. Chem. (UK)*; *Archiv der Pharmazie (Germany)*; *ARKIVOC (USA)*; *Royal Society of Chemistry*; *RSC, Advances (UK)*; *J of Heterocyc. Chem.*; *Mediterranean J. of Chemistry*; *J. Organic Chemistry International*; and others.
- **2013** and since **1974**, is a member of Egypt. Chem. Society Organ.
- **2013** and since **1966**, is a member of the Syndicate of Scientific Workers.

#### **Participation in Public Service:**

- ❖ **2013**, Professor Abdou got the "Award of Diploma, International Foundation Culture Heritage/Montenegro", for her contribution to the "Art and Culture Heritage Organization", in addition to her membership.
- ❖ She is positively active to the Media, discussing the scientific issues, and the Role of NRC in the Development of the Country.
- ❖ **2013** and since **2007**, she is a member of the *Society for Women in Sciences in Developing Countries, Egypt*.
- ❖ **2013** and since 1987, she is a member of the *Organization of the Girls/Faculty of Sciences*, helping girls academically and socially.
- ❖ She has some contributions in public services, especially *Nursing Homes*.

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